



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Frey, et al.

Serial No.: 10/720,656

Filed: 11/24/2003

Title: DISTRACTION AND RETRACTION
SYSTEM FOR SPINAL SURGERY

Attorney Docket No.: 88730-400300

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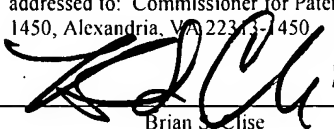
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Applicants request reconsideration of rejections of a Final Office Action of February 20, 2008. Claims 1-45, 47-48, and 57-64 are presently pending. The Final Office Action presents a new rejection based on 35 U.S.C. § 112, second paragraph, repeats rejections previously made in the Office Action of August 22, 2007, and responds to arguments presented to the Patent Office in an Amendment of November 19, 2007. As the Amendment is responsive to the repeated rejections, the entirety of Applicant's arguments in the Amendment is incorporated herein.

Claim 1 is rejected under 35 U.S.C. § 112, 2nd ¶. With emphasis added, the claim states "... said clamping devices each including a foot with a pair of arms located on opposite sides of said frame and each including a receptacle defined between said pair of arms" The rejection finds the second "each including" phrase, added by the Amendment, unclear as to what includes the receptacle. With all due respect, the sentence is a proper grammatical construction, the two instances of "each including" being parallel and both referring to the clamping devices.

Claims 1-4, 7, 15, and 16 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,083,154, to Liu, et al. ("Liu"). Claim 1 requires, *inter alia*, "a frame including

a first portion lying in a first plane and a second portion lying in a second plane, said second plane forming an angle with said first plane.” The Final Office Action states “the planes may be arbitrary planes selected from space, and for the Lui [sic] reference one plane may be vertical and the other may be horizontal so that they will intersect at an angle.” Such treatment of the claim language is repugnant to the usage in the specification, and such treatment renders meaningless the limitations regarding the portions lying in angled planes as any 3-dimensional object would satisfy the definition of “planes” of the Final Office Action.

Ad arguendo, such definition (or lack of) of the planes absolutely ignores the rest of the claim. Claim 1 requires “a number of retractors attached to the frame, at least one of said retractors being attached to said first portion of said frame and extending transversely to said first plane and at least one other of said retractors being attached to said second portion of said frame and extending transversely to said second plane.” Under the interpretation of the Final Office Action, Liu still fails to teach retractors extending in both horizontal and vertical directions.

Claim 1 also requires each frame portion to include a recess for receiving clamping devices of the retractors, “said clamping devices being slideable along a respective one of said first and second portions of said frame for attachment” As the portions are “lying in” angled planes, and the clamping devices are slideable along the “respective” portions, the Final Office Action interpretation would also require Liu to show clamping devices slideable along vertical and horizontal planes, and would also require a recess for each horizontal and vertical plane. Instead, Liu shows devices that rotate around a C-shaped ring, not devices that move in the horizontal and vertical planes. With respect to recesses in both horizontal and vertical planes, the Final Office Action states that the an “inner underside 8a” satisfies the claimed “recess;” however, the claim requires “said first and second portions of said frame each include a recess to receive clamping devices” Were the “inner underside 8a” to be the claimed recess, there would have to be an “inner underside 8a” for each portion and, therefore, for both the vertical and horizontal directions. Again, Liu does not show or suggest anything of the like.

The Liu patent also fails to teach or suggest multiple recesses for receiving the clamping devices. Claim 1 requires each frame portion to include “a recess to receive clamping devices coupled to said respective ones of said retractors,” as noted, as well as the “clamping devices being slideable from said respective recess along a respective one of said first and second portions . . . spaced from the recess.” Emphasis added. The “inner underside 8a” of Liu is a

single recess (as opposed to the claimed multiple recess), the clamping devices are not “slideable from” the “inner underside 8a” (as required by the claim), and the clamping devices are not moveable or otherwise positionable “spaced from the recess” (as also required by the claim).

Claims 5-14 stand rejected under 35 USC §103(a) as being unpatentable over Liu in view of Koros. In light of the above discussion for claim 1, from which these claims depend, it is believed that this rejection is improper and should be withdrawn.

Claims 17-21 and 26-40 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,944,658, to Koros, et al. (“Koros”). To highlight salient features of claim 17, reference is first made to the specification and drawings. A form of an “adjustment mechanism” is numbered as 70, and Fig. 6 shows an adjustment mechanism 70 secured by a clamping device 40, which in turn is secured with the frame. One should note the cooperation of a coupling mechanism 76 with the distractor mechanism 320: the distractor mechanism includes flanges 328 which are received within the coupling mechanism 76, the flanges 328 being best viewed in Fig. 7. Viewing Fig. 7, the flanges 328 include arcuate slots 326 that receive a pin (pivot roller 90, Fig. 9) to allow the distractor mechanism to pivot relative to the coupling mechanism such that the pivot roller moves along the slots 326. The adjustment mechanism 70 includes a portion referred to as engagement member 87 (Fig. 9, e.g.), which may serve as the claimed “end pivotally coupled with” at least one of the distractors. More specifically, the *claimed* adjustment member includes a shaft having an engagement end. In a form of the claimed shaft, the “engagement end” is labeled as reference number 85 (see Fig. 9).

In operation, the shaft 85 and engagement member 87 reciprocate along the longitudinal axis of the shaft 85 to move the engagement member 87 into and out of engagement with the distractor mechanism (engagement portion 324 thereof). The engagement member 87 is between the flanges 328, and the pivot roller 90 simply passes through an oversized opening transverse (slot 88, Fig. 11) through the engagement member 87. Accordingly, the shaft end (engagement member 87) is pivotally coupled with the distractor mechanism (engagement member 324).

Claim 17 requires a system including first and second anchors, a frame, a retractor, and a pair of distractor mechanisms. In particular, the system includes “at least one adjustment mechanism engageable with at least one of said first and second distractor mechanisms,” the adjustment mechanism having a shaft with an end “pivotally coupled with said at least one of said first and second distractor mechanisms at a pivoting coupling location adjacent a proximal

end” thereof and “extending away from said pivoting coupling location toward said frame and into a clamping device movable along said frame, the clamping device operable to clampingly engage said adjustment mechanism to said frame.”

Most pointedly, claim 17 requires a “shaft having a distal end pivotally coupled with at least one of said first and second distractor mechanisms at a pivoting location,” which Koros fails to teach. Koros is not entirely clear on the operation of its purported “tilt” feature. For instance, screws 84 and 96 must advance against something (see Fig. 5) in order to pivot. For screw 84, the entire coupling 80 somehow both tilts and is retained in a general position on crossbar 14, but there is nothing that explains how advancing the screw 84 does not simply result in raising the entire coupling 80/retractor arm 18/retractor blade 26 assembly relative to the crossbar 14. This same issue is presented for screw 86, which also requires the entire coupling 82 to pivot (compare Figs. 1, 4, and 5). For screw 86 and coupling 82, it is additionally unclear how the coupling 82 remains engaged with the teeth of the rack gear 16 when it pivots.

In any event, the above-description for Koros is suitable to demonstrate how the patent fails to teach the features of claim 17. That is, claim 17 requires a shaft “having a distal end pivotally coupled with” one of the distractor mechanisms. In Koros, the closest thing to a “shaft” would have to be the screws 84 and 86: however, each of these is threadably coupled with the distractor mechanism, at best. The Office Action of August attempts to describe these features with a terse “(see Figure 1)” statement, while the Final Office Action augments this with “the shaft was interpreted to be the body below element 48 that includes a pivot pin and engages element 52.” However, the “body below element 48” is, at best, pivotable with the frame; also, it is a distractor mechanism and cannot be pivotable with itself.

The “body below element 48” also fails to satisfy claim limitations of the shaft “extending away from said pivoting coupling location toward said frame and into a clamping device movable along said frame, the clamping device and operable to clampingly engage adjustment mechanism to said frame,” and the limitations of the shaft as part of the adjustment mechanism being entirely separate from the “clamping device operable to clampingly engage said adjustment mechanism to said frame.” The Koros “body below element 48” clearly does not extend toward the frame, and does not extend into a clamping device, more appropriately the body below element 48 being a portion of the clamping device.

Claims 22-25 stand rejected as unpatentable over Koros in view of Liu. It is believed this rejection is improper in light of the above discussion for claim 17, from which claims depend.

Claims 41-48 are rejected as unpatentable over Koros in view of Liu. Claim 41 combines requires adjustment mechanisms coupled to first and second distractor mechanisms, like claim 17, with a frame with first and second portions lying in first and second planes forming an angle, like claim 1. As neither Koros nor Liu shows or suggests the first and second plane, as discussed with respect for claim 1, this rejection is believed to be improper for claim 41 and its dependents.

Claims 57-64 are rejected as unpatentable over Koros in view of Liu. While the Final Office Action provides a modicum of additional explanation as to the combination of Koros and Liu, such combination still fails to teach or otherwise make obvious claims 57 and 58, and the dependents therefrom. Specific analysis is present in the Amendment, previously noted as being entirely incorporated herein.

Conclusion

Applicants respectfully submit that the cited prior art does not disclose, teach, suggest, or otherwise make obvious the claims. Accordingly, Applicants respectfully request that claims be deemed allowable at this time and that a timely Notice of Allowance be issued in this case. This Pre-Appeal Brief is submitted with a Notice of Appeal, a Petition for Extension of Time for 2 months, and proper fees therefor. If any other fees are due in connection with this application, the Patent Office is authorized to deduct the fees from Deposit Account No. 19-1351. If such withdrawal is made, please indicate the attorney docket number (88730-400300) on the account statement.

Respectfully submitted,

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